REMARKS

Rejection of claim 7 under 35 U.S.C. §112, second paragraph

The Examiner rejected claim 7 under 35 U.S.C. §112, second paragraph, because the phrase "the at least one processor" lacked antecedent basis. Claim 7 is amended herein to positively recite at least one processor, thereby providing proper antecedent basis for "the at least one processor" in claim 7. The amendment to claim 7 herein thus overcomes the Examiner's rejection of claim 7 under 35 U.S.C. §112, second paragraph.

Rejection of claims 1-26 under 35 U.S.C. §102(e) as being anticipated by Moiin

The Examiner rejected claims 1-26 under 35 U.S.C. §102(e) as being anticipated by Moiin. Each of these claims is addressed below. Note that the only amendment to the claims herein is the amendment to claim 7 to address the rejection under 35 U.S.C. §112, second paragraph. As a result, each of claims 1-6 and 8-26 are the original claims as filed, and applicants respectfully request reconsideration of the Examiner's rejection of these claims.

Claim 1

In rejecting claim 1, the Examiner reads "applications which execute in any member node of current cluster" in Moiin on the job recited in the claim. A very cursory examination of the claim and of the teachings of Moiin show this mapping does not make sense. A job in claim 1 includes at least one work thread and a main thread. The applications in Moiin may be executed by threads, but do not "include" threads. A job in claim 1 is a process that includes multiple threads, while the applications in Moiin are software applications. For this reason, the applications in Moiin do not read on the job in claim 1.

The Examiner then reads the main thread 1002 in Moiin on the main thread in claim 1 by stating: "(main thread 1002 ... monitors messages received)". This is a false statement. The Examiner has quoted language from Moiin in a way that is misleading. The main thread 1002 of Moiin does not monitor messages received. This is the function of timeout thread 1012, as stated expressly in Moiin. For this reason, the main thread of Moiin does not read on the main thread in claim 1.

Next, the Examiner reads the remote procedure calling of Moiin on the main thread that "routes appropriate messages from the at least one computer system to the at least one work thread". A remote procedure call as taught in Moiin is a way for one computer system to invoke a function (or procedure) in a different computer system. The claim language, in contrast, recites "a main thread . . . that routes appropriate messages *from* the at least one computer system *to* the at least one work thread". Note the "at least one work thread" is recited as part of the job at lines 6-7 of claim 1. We see from the express language in claim 1 that the main thread routes messages from at least one computer system coupled to the apparatus to the at least one work thread in the job. The main thread thus performs a routing function of messages from other computer systems to the at least one work thread. The remote procedure call in Moiin is a way for one computer system to invoke functions on a different computer system, and has absolutely nothing to do with the routing of messages from the main thread to one or more work threads within the same computer system. For this reason, the remote procedure call in Moiin does not read on the routing of messages from one computer system to at least one work thread by a main thread.

The Examiner then recites "that signals to the cluster engine when at least one fault occurs when the at least one work thread performs the at least one predefined task", citing "messages which indicate to CMM 220A which of the other nodes are operative" in Moiin. Again, the Examiner has read a communication between nodes on the function recited in claim 1 that occurs between threads on a single node. In claim 1, the main

thread signals to the cluster engine in the main thread's node when at least one fault occurs when the at least one work thread performs the at least one predefined task. This communication all happens on the same node. The main thread thus monitors the progress of the at least one work thread, and signals to the cluster engine when a fault occurs. The passing of messages between nodes to indicate which nodes are operative has nothing to do with this function recited in claim 1. Because Moiin does not teach or suggest a main thread that signals to the cluster engine when at least one fault occurs when the at least one work thread performs the at least one predefined task, claim 1 is allowable over Moiin.

For the many reasons given above, applicants respectfully assert that claim 1 is allowable over Moiin, and respectfully request reconsideration of the Examiner's rejection of claim 1 under 35 U.S.C. §102(e).

Claim 2

In rejecting claim 2, the Examiner states: "As to claim 2, Moiin (p6 12-30) teaches a protocol that includes at least one acknowledge round (each member node of a cluster responds to a reconfiguration message . . . by broadcasting a responding reconfiguration message)." Applicants admit that Moiin teaches a sort of communication protocol where each member node of a cluster responds to a reconfiguration message by broadcasting a responding reconfiguration message. Note, however, that claim 2 expressly recites "wherein the at least one predefined task comprises a protocol that includes at least one acknowledge (ACK) round, and that performs only local processing between ACK rounds." The Examiner's rejection of claim 2 fails for two reasons. First, the communication protocol cited by the Examiner in Moiin in rejecting claim 2 is not defined by the at least one predefined task, as recited in claim 2. Second, the Examiner has utterly failed to address the limitation "and that performs only local processing between ACK rounds" in claim 2. As a result, the Examiner has failed to establish a

prima facie case of anticipation for claim 2 under 35 U.S.C. §102(e). Claim 2 is directed to the specifics of the at least one predefined task. By including at least one ACK round and performing only local processing between ACK rounds, the invention in claim 2 assures that a work thread cannot get stuck between ACK rounds. Moiin has no such teaching or suggestion. Applicants respectfully assert that claim 2 is allowable over Moiin, and request reconsideration of the Examiner's rejection of claim 2 under 35 U.S.C. §102(e).

Claims 3-4

In rejecting claims 3-4, the Examiner states: "As to claims 3-4, Moiin (p.13 24-57) teaches the main thread performs only local processing sans waiting for local resources." The cited language in Moiin has no teaching or suggestion that reads on the limitations in claims 3-4. Because the Examiner has not specifically identified what teachings in Moiin allegedly read on the limitations in claims 3-4, the Examiner has failed to establish a prima facie case of anticipation for claims 3-4 under 35 U.S.C. §102(e). Nowhere does Moiin teach or suggest that the main thread performs only local processing. Nowhere does Moiin teach or suggest that the main thread does not wait for any local resource, and thus is guaranteed to receive a message sent by the cluster engine. For these reasons, claims 3 and 4 are allowable over Moiin, and applicants respectfully request reconsideration of the Examiner's rejection of claims 3-4 under 35 U.S.C. §102(e).

Claims 5-6

In rejecting claims 5-6, the Examiner cites to Moiin at p9 line 51 to p10 line 7. This language in Moiin discusses one or more nodes leaving the cluster, but does not teach the specifics of how this is done. Claim 5 recites an unregistration with the cluster engine. Nowhere does Moiin teach the registration or unregistration with the cluster

engine as a way to join or leave a cluster. Claim 6 recites that the unregistration with the cluster engine causes the cluster engine to generate a membership change message. Nowhere does Moiin teach the generation of a membership change message in response to an unregistration with the cluster engine. Because Moiin does not teach the specifics of how nodes leave a cluster, Moiin cannot teach the specific mechanisms in claims 5-6. Applicants respectfully assert that claims 5-6 are allowable over Moiin, and request reconsideration of the Examiner's rejection of claims 5-6.

Claim 7

In rejecting claim 7, the Examiner states: "As to claim 7, see the discussions of claims 1-2 and 6 supra. The limitations in claim 7 are an amalgamation of the features recited in claims 1-2 and 6. Hence, Moiin's teachings regarding claims 1-2 and 6 are similarly applied to the corresponding claim 7 limitations." Applicants respectfully assert that the Examiner has failed to establish a prima facie case of anticipation under 35 U.S.C. §102(e) for claim 7.

Claim 7 recites limitations that are not found in any of claims 1-2 or 6. Claim 7 recites a cluster of computer systems that each includes the limitations in lines 3-21 of claim 7. None of claims 1-2 or 6 contain the limitation of such a cluster. In addition, claim 7 recites a network interface at lines 3-4 that is not addressed in any of claims 1-2 or 6. As a result, the Examiner has failed to establish a prima facie case of anticipation for claim 7 under 35 U.S.C. §102(e). In addition, claim 7 contains many of the limitations addressed above in claims 1-2 and 5-6 that patentably distinguish over Moiin. As a result, claim 7 is allowable over Moiin for the same reasons given above with respect to claims 1-2 and 5-6. Applicants respectfully request reconsideration of the Examiner's rejection of claim 7 under 35 U.S.C. §102(e).

Claims 8-14

The Examiner's rejection has not addressed ANY of method claims 8-14. As a result, the Examiner has failed to establish a prima facie case of anticipation for any of claims 8-14 under 35 U.S.C. §102(e). Applicants respectfully assert that Moiin does not teach the unique combination of features in claims 8-14, and request reconsideration of the Examiner's rejection of claims 8-14 under 35 U.S.C. §102(e).

Claim 15

In rejecting claim 15, the Examiner relies upon the rejection of claim 6. Note, however, that claim 15 includes the limitations of claim 14 upon which it depends, and the limitations in claim 14 were not addressed by the Examiner. As a result, the Examiner has failed to establish a prima facie case of anticipation for claim 15 under 35 U.S.C. §102(e). Applicants respectfully assert that Moiin does not teach the unique combination of features in claim 15, and request reconsideration of the Examiner's rejection of claim 15 under 35 U.S.C. §102(e).

Claim 16

The Examiner rejected claim 16 using logic very similar to the rejection of claim 1. As stated above with respect to claim 1, Moiin does not teach or suggest a main thread with the limitations expressly recited in claim 16. As a result, claim 16 is allowable over Moiin, and applicants respectfully request reconsideration of the Examiner's rejection of claim 16 under 35 U.S.C. §102(e).

Claims 17-18

Claims 17 and 18 depend on claim 16, which is allowable for the reasons given above. As a result, claims 17 and 18 are allowable as depending on an allowable independent claim. Applicants respectfully request reconsideration of the Examiner's rejection of claims 17-18 under 35 U.S.C. §102(e).

Claims 19-23

The Examiner rejected claims 19-23 based on the rejection of claims 2-6. Claims 19-23 are allowable for the same reasons given above with respect to claims 2-6, respectively, and applicants respectfully request reconsideration of the Examiner's rejection of claims 19-23 under 35 U.S.C. §102(e).

Claim 24

In rejecting claim 24, the Examiner states that claim 24 is the same as claim 1, except claim 24 is a computer program product claim and claim 1 is an apparatus claim. This statement is incorrect. Claim 24 contains limitations not found in claim 1. For example, claim 24 recites that the protocol only performs local tasks between ACK rounds. Claim 24 also recites unregistering with the cluster engine, which causes the cluster engine to generate a membership change to remaining members of the group. Because these limitations are not found in claim 1, the Examiner's reliance upon claim 1 in rejecting claim 24 results in the Examiner failing to establish a prima facie case of anticipation for claim 24 under 35 U.S.C. §102(e). Claim 24 contains many of the limitations addressed above in claims 1-2 and 5-6 that patentably distinguish over Moiin. As a result, claim 24 is allowable over Moiin for the same reasons given above with respect to claims 1-2 and 5-6. Applicants respectfully request reconsideration of the Examiner's rejection of claim 24 under 35 U.S.C. §102(e).

Claims 25-26

Claims 25 and 26 depend on claim 24, which is allowable for the reasons given above. As a result, claims 25 and 26 are allowable as depending on an allowable independent claim. Applicants respectfully request reconsideration of the Examiner's rejection of claims 25-26 under 35 U.S.C. §102(e).

General Comments

Applicants have complied with the Examiner's request to provide this response in WordPerfect format on a 3 ½ inch IBM format floppy disk, which is enclosed.

The Examiner's claim rejections are based upon a text printout of the Moiin patent, citing page numbers and line numbers. This second version of Moiin makes it impossible to determine from a standard printed patent what portions of Moiin the Examiner is referring to when citing page numbers and line numbers of the text printout. Because the line numbers in the text printout are not numbered, the Examiner's reference to page numbers and line numbers of the text printout forces the reader to manually count lines to determine which portions of Moiin the Examiner is referring to. This is a silly exercise given the clearly-marked column and line numbers in the printed patent. Applicants' attorney strongly encourages the Examiner to use the standard column and line number references to the printed patent in future office actions. This will allow anyone who needs to review the office action to refer to the standard printed patent, rather than having to retrieve the text version in the file wrapper.

Conclusion

In summary, none of the cited prior art, either alone or in combination, teach, support, or suggest the unique combination of features in applicants' claims presently on file. Therefore, applicants respectfully assert that all of applicants' claims are allowable. Such allowance at an early date is respectfully requested. The Examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case.

Respectfully submitted,

By 

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